NAGALAND UNIVERSITY

(A Central University established by the Act of Parliament no. 35 of 1989)



ADMISSION BROCHURE 2021-2022

SCHOOL OF ENGINEERING AND TECHNOLOGY https://nagalanduniversity.ac.in

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MESSAGE FROM THE VICE-CHANCELLOR'S DESK



Nagaland University is a Central University established on 6th September 1994 by an Act of the Parliament No. 35 of 1989. The University has its Headquaters at Lumami in Zunheboto district, Nagaland while its campuses are situated at Meriema, Medziphema and Dimapur. The School of Engineering & Technology (SET), Nagaland University is currently located at Dimapur, the commercial hub of Nagaland. The School offers B.Tech. degree programme in five steams of Engineering & Technology, viz. Information Technology, Computer Science & Engineering, Biotechnology and Agricultural Engineering Technology.

B.Tech. degree programmes are usually application and skill-oriented courses. Their prime focus is on making the students understand the technology behind the working of gadgets and modify or enhance their working quality with emphasis on practical side of the curriculum. The University recognizes that with the evolution of technological advancement, new skills will be required in order to compete in the market. Our key priority is to make the students industry-ready by assessing their competencies and aligning them to what is needed by the industry. This can be achieved by bringing research and innovation in the core of education and making it affordable. Industrial visits and internships are also integral part of the course at SET.

SET, Dimapur has a qualified team of faculty dedicated to train and sharpen the innovative skills of its students in meeting the requirements of the modern world which is immensely dependent on technology. The University, through the Dean of the School assisted by his administrative team, provides all necessary support to the students in pursuing their academic development. The School has adequate infrastructure including modern classrooms, library, computer lab, practical and research laboratories with modern equipment, separate hostels for girls and boys, canteen, etc. It is gratifying to see many students passing out from the School of Engineering & Technology getting suitable placements within and outside India.

I am happy to welcome all aspiring students seeking a bright academic career in Engineering & Technology under Nagaland University.



(PROF. PARDESHI LAL) VICE-CHANCELLOR NAGALAND UNIVERSITY

MESSAGE FROM THE DESK OF DEAN



It is my great privilege to introduce the School of Engineering and Technology, a constituent school of the Nagaland University which is one of the Central Universities of the Country. The school was established in 2007 with a mission to bridge the gap between education, research and industries. The schools attracts students from various parts of the country. The school has a strong team of young and dynamic faculties who are committed and dedicated for cause of students for their excellence in the field of Engineering and Technology. Many of our students crack GATE exam and pursue higher studies in many reputed institutions. Some of the students are holding reputed jobs in government and non-government sectors too.

The school has five departments, namely Agricultural Engineering and Technology, Biotechnology, Electronics and Communications Engineering, Computer Science and Engineering and Information Technology. The school has given a priority on under graduate academic activities. The school has a central library where student can explore different books. The school also has conference hall for organising and conducting various workshop and conferences especially for the students. The Academic environment is well connected with internet facility both LAN and Wi-fi. Besides, for the development of personality of students, various co-curriculum like sports activities, cultural and Technical Festivals are practice throughout the year. There are three boy hostels and three girl hostels and are provided with bus service for transportation.

I welcome all the aspiring students and wishes a meaningful stay for shaping a bright future through School of Engineering and Technology.

(PROF. V.K. VIDYARTHI)

DEAN, SET NAGALAND UNIVERSITY

SET OFFICIALS AND IN-CHARGES

Vice Chancellor PROF. PARDESHI LAL

Dean: PROF. V.K. VIDYARTHI

Assistant Registrar MRS. LULENPOKLA

I/C Academic & Examinations MR. SHANCHAMO YANTHAN

I/C Student Welfare: MR. AKANGJUNGSHI LONGKUMER

I/C Dept. of Agricultural Engineering and Technology DR. PRAMOD CH. DIHINGIA

> I/C Dept. of Biotechnology DR. IMLITOSHI JAMIR

I/C Dept. of Computer Science and Engineering MR. AKANGJUNGSHI LONGKUMER

I/C Dept. of Electronics and Communication Engineering MRS. AYANGLA JAMIR

> Warden, Girl's Hostel MRS. IMESANGLA AO I/C Dept. of Information Technology MR. SOURAV HAZARIKA

> > I/C Training & Placement MR. SOURAV HAZARIKA

I/C Common Pool MR. RAMESH SINGH

Warden Boys's Hostel DR. CHITRASEN LAIRENJAM

> **System Administrator** MR. ANTHONY VISA

Library Professional Assistant MR. JEVITO SHOHE

I/C Sports & Game MR. SUDIPTA PATOWARY

1. THE UNIVERSITY

The Nagaland University is a Central University established by an act of parliament in 1989. It came into being on 6th September, 1994. The objective of the University is to disseminate knowledge by providing infrastructural and research facilities in such branches of learning as in Humanities, Natural & Physical Science, Social Science, Agricultural Science, Engineering & Technology and Management. The University has departments located in its campuses in Lumami, Kohima, Medziphema and Dimapur.

2. THE SCHOOL

School of Engineering & Technology was inaugurated on 29th October, 2007 by the then Governor of Nagaland (Chief Guest) His Excellency Shri K. Sankaranarayanan and the then Hon'ble Chief Minister of Nagaland (Guest of Honor) Shri Neiphiu Rio. It is the first institution of Engineering in the State of Nagaland with state-of-the-art infrastructure. The academic building is located at D.C. Court Junction, Dimapur. The School is housed in a single four storied building with a carpet area of 35500 sq.ft. The Administrative Block is situated at Landmark Colony, Dimapur which is a walking distance from the Academic Complex.

THE SCHOOL OFFERS BACHELOR OF TECHNOLOGY DEGREE IN THE FOLLOWING UNDERGRADUATE PROGRAMS

- Agricultural Engineering and Technology
- Biotechnology
- Computer Science & Engineering
- Electronics & Communication Engineering
- Information Technology

The Campus is well connected by train, air service as well as road transportation. The Campus is networked with all the other campuses of Nagaland University. The School (University) has a Residential Complex which houses staffs and students, has sports and recreational facility and a furnished Guest House. Hostel facility is provided for both boys and girls with regular bus service.

3. INFRASTRUCTURE AND FACILITIES

3.1 STUDENTS AMENITIES AND ACTIVITIES

3.1.1 HOSTEL

The School provides limited Hostel facilities for the students. There are three boys and three girl's hostels accommodating them on a twin-sharing basis. All hostellers have to abide by the rules and regulations of the hostel.

3.1.2 SCHOOL MAGAZINE

The School publishes School magazine annually to encourage creativity of the students.

3.1.3 CAREER COUNSELLING AND PLACEMENT

The career counselling and placement cell guide the students regarding their future academic and employment career. Training and Placement in-charge updates the students regarding any placement activities from time to time.

3.1.4 GAMES AND SPORTS

Facilities like Table Tennis, Carom, Cricket, Chess games and Gym are available to the students residing in the Hostel.

3.1.5 STUDENT'S ACTIVITIES

The student organizes various activities from time to time in the campus.

3.1.6 INTERNET FACILITY

The Academic Complex is connected to the internet with 100 mbps broadband connection from NKN (National Knowledge Network)

3.1.7 LIBRARY

The Library has collection of latest Textbooks, Reference books, Journals on different streams of Science, Engineering and Technology. The Library has a study room where the students can interact with each other. In addition to this, the University has e-library (INFLIBNET programme already accessible) which provides access to numerous books, National and International Journals on-line.

4. ACADEMIC PROGRAMMES

The School offers 4 years (Eight semesters) academic programmes approved by AICTE/University leading to B.Tech. degrees on successful completion of the course. The School adopts a teaching pattern of course credit system in semesters. One academic year is divided into two semesters comprising approximately 20 -weeks per semester. Major emphasis is laid on practical & industrial training.

5. ELIGIBILITY CRITERIA FOR ADMISSION

5.1 FRESH ENTRY (AFTER 10+2)

The candidates seeking admission to any Discipline of Technology should secure in aggregate the minimum of 50% marks for General Category and 45% marks in case of SC/ST Category. Students should have passed Physics, Chemistry and Mathematics in their 10+2 Examination. Students opting for Biotechnology programme should have passed Physics, Chemistry Mathematics and Biology in their 10+2 Examination.

5.2 LATERAL ENTRY (AFTER DIPLOMA/B.SC)

The candidates seeking admission through lateral entry to any Discipline of Technology should secure in aggregate the minimum of 50% marks for General Category and 45% marks in case of SC/ST Category along with the criteria give below.

- 1. Passed Diploma examination from an AICTE approved institution; with at least 50% marks (45% in case of candidates belonging to reserved category) in appropriate branch of Engineering/ Technology.
- 2. Passed B.Sc. degree from a recognized University as defined by UGC, with at least 50% marks (45% in case of candidates belonging to reserved category) and passed XII standard with mathematics as a subject.
- 3. Provided that in case of students belonging to B.Sc. stream shall clear the subjects of Engineering graphics/ Engineering Drawing and Engineering Mechanics of the first year engineering program along with the second year subjects.
- 4. Provided further that, the students belonging to B.Sc. stream shall be considered only after filling the supernumerary seats in this category with students belonging to the diploma stream.
- 5. Provided further that students, who have passed Diploma in Engineering & Technology from a university approved institution or B.Sc. degree from a recognized University defined by UGC, shall also be eligible for admission to the first year engineering degree courses subject to vacancies in the first year class in as the vacancies at lateral entry are exhausted. However, the admission shall be based strictly on the eligibility criteria as mentioned in 1, 2, 3 and 4 above.

6. ALLOCATION OF SEATS

6.1 FRESH ENTRY 10 + 2

The total number of seats in each discipline is 30. Seat allocation for each discipline for different states and other quota is given below.

| 1. | Nagaland | 6 |
|-----|-------------------------|----|
| 2. | Arunachal Pradesh | 1 |
| 3. | Meghalaya | 1 |
| 4. | Mizoram | 1 |
| 5. | Tripura | 1 |
| 6. | Sikkim | 1 |
| 7. | Assam | 1 |
| 8. | Manipur | 1 |
| 9. | Physically Challenged* | 1 |
| 10. | University Quota | 1 |
| 11. | Jammu & Kashmir | 1 |
| 12. | All India Open Category | 14 |

6.2 LATERAL ENTRY

Diploma holders and BSc degree holders shall be eligible for admission to second year Engineering course(s) upto a maximum of 10% of approved intake which shall be over above supernumerary to the "Approved intake" plus the unfilled vacancies of 1st year.

* Unfilled seats will be added to All India Open Category.

7. SELECTION AND ADMISSION

SELECTION FOR ADMISSION UNDER VARIOUS QUOTAS IS DONE AS MENTIONED BELOW:

7.1 ALL INDIA OPEN CATEGORY

- Aggregate of compulsory subjects along with Physics, Chemistry, Mathematics, Biology for Biotechnology.
- Aggregate of compulsory subjects along with Physics, Chemistry, Mathematics for other departments.
- The merit list shall be prepared by considering 70% of 12th standard and 30% of JEE main/advanced score for fresh entry.
- Selection will be based on marks obtained in diploma examination for Lateral entry.

7.2 UNIVERSITY QUOTA

The University quota shall be taken care as per rules.

7.3 STATE QUOTA

Selection for admission under State quota is done by respective State Governments. On receipt of the list of nominated Candidates from respective Government, admission formalities are completed by the School as per eligibility criteria.

7.4 LATERAL ENTRY

Selected for admission under lateral entry will be as per marks obtained in Diploma/B.Sc.

7.5 FEES STRUCTURE

Fees to be paid at the time of admission/renewal of admission for B.Tech program at School of Engineering & Technology, Nagaland University

| Sl. No. | FEES | PERIODICITY | AMOUNT (₹) (1st Semester) | AMOUNT (₹) (All Semester) |
|----------------|---------------------------------------|----------------|------------------------------|------------------------------|
| 1 | Admission fee | Once | 1050/- | - |
| 2 | Registration fee | Once | 400/- | - |
| 3 | Tuition fee | Every Semester | 7000/- | 7000/- |
| 4 | Laboratory fee (as applicable) | Every Semester | 1050/- | 1050/- |
| 5 | Library fee | Every Semester | 320/- | 320/- |
| 6 | Library caution Money (Refundable) | Once | 500/- | - |
| 7 | Sports fee | Every Semester | 60/- | 60/- |
| 8 | Medical fee | Every Semester | 110/- | 110/- |
| 9 | Examination fee | Every Semester | 810/- | 810/- |
| 10 | Students' activity fee | Every Semester | 320/- | 320/- |
| 11 | Annual Magazine fee | Every Semester | 110/- | 110/- |
| 12 | Students' Aid fund | Once | 210/- | - |
| 13 | Workshop/Seminar/Conference fee | Once | 840/- | - |
| 14 | Industrial interface & Technical Fest | Every Semester | 500/- | 500/- |
| 15 | Placement Activities | Once | 1500/- | |
| 16 | Internet fee | Every Semester | 110/- | 110/- |
| 17 | Department Caution Money (Refundable) | Once | 1580/- | - |
| 18 | University Development Fund | Once | 100/- | - |
| | Sub Total | | 16,570/- | 10,390/- |
| FOR HOSTELLERS | | | | |
| 19 | Hostel Admission | Once | 200/- | |
| 20 | Hostel fee | Every Semester | 3000/- | 3000/- |
| 21 | Hostel Caution Money (Refundable) | Once | 1580/- | - |
| | Sub Total | | 4780/- | 3000/- |

FEES STRUCTURE TABLE

TRANSPORTATION CHARGES

TRANSPORTATION (THOSE AVAILING UNIVERSITY BUS FACILITY) - ₹600/- PER SEMESTER.

- Students who desire to withdraw his/her name from the roll of the University and claim any refund then the fees shall be dealt with as per the University /UGC/MHRD/AICTE/ICAR/NCTE guidelines.
- Hostel Fee does not include Mess Fee.
- The fee structures are subject to change from time to time.
- Fees should be deposited using Online State Bank I-Collect using Debit/Credit Card/Net-banking/SBI Power Jyoti.

The receipt can be generated from the same portal.

| OTHERS | | |
|--------|--|---------------|
| 1 | Identity Card/Duplicate ID Card | 100 per Card |
| 2 | Repeat of examination | 300 per Paper |
| | Late fine | |
| 3 | Beyond 7 days of starting of course | 100 per Day |
| | (For 2nd Semester and Subsequent Semester) | |

7.6 REGISTRATION IN VARIOUS COURSES

Candidate has to take admission by payment of prescribed fees immediately after selection. In case of failure to pay fees at the time of admission, the seat allotted to the candidate(s) will stand forfeited.

Physical presence of the candidates is mandatory for registration. Every student has to fill up prescribed course registration forms (3 copies).

7.7 EXAMINATION AND EVALUATION

Semester system with internal evaluation comprises of continuous assessments, Mid-term exam, internal assessment and End - Term Theory & Practical Examinations. The performance of a student in a particular course is evaluated and expressed in a10 points grading scale which are converted to letter grade as stated below:

| EQUIVALENT LETTER GRADE | CREDIT POINTS |
|-------------------------|-----------------------|
| 0 | 10 |
| А | 9 |
| В | 8 |
| С | 7 |
| D | 6 |
| Е | 5 |
| F | 0 |
| | O A B C D |

| CGPA | CLASS |
|---------------|------------------------------|
| 8.0 and Above | First Class with Distinction |
| 6.5 to 7.9 | First Class |
| 5.5 to 6.4 | Second Class |
| 5.0 to 5.4 | Pass |
| Below 5.0 | Failed |

THE FINAL PERFORMANCE OF A STUDENT ON COMPLETION OF THE B. TECH. COURSE WILL DEPEND ON THE CUMULATIVE GRADE POINT AVERAGE (CGPA).

* TO BE ELIGIBLE FOR APPEARING IN THE END TERM EXAMINATION, 75% ATTENDANCE IS MANDATORY IN ALL COURSE.

8. ACADEMIC REGULATION

8.1 CHANGE OF BRANCH/ DISCIPLINE

Normally, a student admitted to a particular branch/ discipline of the undergraduate programme shall continue studying in that discipline till completion. However, in special cases the School may permit a student to change from one discipline of studies to another after the first two semesters. Such changes shall be permitted, in accordance with the provisions laid down hereinafter, from a B. Tech. programme in any discipline to a B. Tech programme in any other discipline. Only those students shall be eligible for consideration of a change of discipline after the second semester, who have completed all the common credits required in the first two semesters of their studies, in their first attempt.

Applications for a change of discipline must be made by intending eligible students in the prescribed form. The Academic Section shall call for applications in the beginning of the odd semester of each academic year and the completed forms must be submitted by the last date specified in the notification. Students may enlist up to three choices of discipline, in order of preference, to which they wish to change over. It shall not be permissible to alter the choice after the application had been submitted.

Change of discipline shall be made strictly in order of merit of the applicants. For this purpose, the student must have a CGPA of atleast 7.5 obtained at the end of the second semester. In case of a tie the JEE (MAIN) Score of the applicants shall be considered. In the absence of JEE (MAINS) score, the department may devise its own strategy to select the candidates. The applicants may be allowed a change in discipline, strictly in order of merit, subject to the limitation that the strength of a branch should not fall below the existing strength by more than ten percent and should not go above the sanctioned strength by more than ten percent.

All changes of discipline made in accordance with the above rules shall be effective from the third semester of the applications concerned. No change of discipline shall be permitted after this.All

changes of discipline shall be final and binding on the applicants. No student shall be permitted, under any circumstances, to refuse the change of discipline offered

8.2 ATTENDANCE OF STUDENTS

Attendance in all classes (lectures, tutorials, laboratories, practical, studio, workshops etc) must be at least 75 percent of the total classes. A student shall be debarred from appearing in the End-Term Examination if Her/His attendance falls below 75 percent and shall be awarded an F Grade in that course.

The Dean may, on the recommendation of the Advisor/ Course In-charge, condone any attendance up to 5 per cent in a course(s) in exceptional circumstances as given below (in a and b) and shall allow the student with an attendance of 75 per cent or more to appear at the end term examination. No condonation under any circumstances shall be granted to those having below 75 per cent of attendance in a course(s).

a. Authorized absence under official directives

The Dean of the School, on the recommendation of the concerned Head/ In-charge, may permit a student to represent the University/ School in the inter-University or at the National level/ Regional level curricular and co-curricular activities. The period for which the student is deputed for the above shall be treated as leave. The Head/ In-charge of the Department, Academic cell/In-charge Student Welfare as well as the student concerned shall, however, ensure that Her/His attendance does not fall short of the minimum fixed vide section 7.1. The Dean shall notify the name(s) of such student (s) to the Head/ In-charge of the Department for conveying the information to the teacher(s)/Instructor(s) concerned for the record. The Head/ In-charge of the Department, Academic Cell, shall convey the same to the Advisor of the student(s).

b. Serious illness

If a student is unable to attend classes owing to serious illness, the student concerned/guardian shall submit an application along with a medical certificate from the University Medical Officer stating clearly the period for which the student was advised for treatment and rest along with recommendation of the hostel warden within 3 days from the date of reporting to the Dean. Such application shall be addressed to the Dean, who may grant leave for the days of absence.

It shall be the responsibility of the student to intimate the Warden of the hostel in which She/He is residing, and the concerned instructors regarding Her/His absence before availing the leave.

8.3 CONDUCT AND DISCIPLINE

Students shall conduct themselves within and outside the precincts of the School in a manner befitting the students of an institution of national importance. Ragging in any form is banned: acts of ragging shall be considered as gross indiscipline and shall be severely dealt with. The following acts of omission and/or commission shall constitute gross violation of the code of conduct and are liable to invoke disciplinary measures by the Student Disciplinary Action Committee.

- a. Ragging
- b. Lack of courtesy and decorum; indecent behavior anywhere within or outside the campus.
- c. Willful damage or stealthy removal of any property/belongings of the School/Hostel or of fellow students.
- d. Stealing, Gambling, Possession, consumption or distribution of alcoholic drinks or any kind of hallucinogenic drugs.
- e. Immoral activities.
- f. Mutilation or unauthorized possession of library books.
- g. Noisy and unseemly behavior, disturbing studies of fellow students.
- h. Hacking in computer systems (such as entering other person's area without prior permission, manipulation and/ or damage of computer hardware and software etc.)

- i. Use of University/School premises for any purposes other than that for which it meant without the permission of the authority concerned.
- j. Breach of the University rules and regulations.
- k. Any other cause/act which may lower the prestige of the University/School.
- 1. Organizing meeting by students inside the campus or calling the outsider to organize meeting inside the hostel campus without permission.
- m. Violation of hostel discipline.
- n. Any other act of gross indiscipline.

Commensurate with the gravity of the offence, the punishment may be reprimand, fine, expulsion from the hostel, debarment from and examination, rustication for a specified period or even outright expulsion from the school.

8.4 HOSTEL RULES AND REGULATIONS

These Rules applies to all the students who are staying in the hostel of the School of Engineering & Technology, Nagaland University.

ROOMS

a) Admission and Allotment: Students who seek admission to the hostel have to apply separately in the Hostel Registration/ admission Form which can be obtained from the Administrative office. Room allocations shall be done during the Hostel admission.

b) Room Changes

- i) Room allotments are normally valid for the entire academic year.
- ii) Students must occupy only those rooms specifically allotted to them.
- iii) Students must not shift/ move to another room without the permission of the warden. If a room change is desired, a written request may be given to the Warden with proper justification. Approval of room change is the sole discretion of the Warden.

c) Taking care of own room

- i) Hostel rooms are equipped with furniture and fittings of appliances. Student occupying the room shall sign for the receipt of items in Register. Students shall be responsible to hand over the items in their original serviceable condition to hostel authorities while leaving the rooms on closure of the academic session.
- ii) No furniture must be removed from respective rooms. Removal of furniture or furnishings shall invite disciplinary action. All university furniture must be in the room and in proper condition when a student move out of the room.
- iii) Any damage to hostel property shall be replaced by recovering the cost of repair from the individual concerned. If the damaged item is irreparable, the actual cost of the property shall be realized from the individual concerned. In cases where responsibility for such acts cannot be determined, a common fine shall be imposed on all the occupants of the room/ hostel.
- d)**Repairing works:** The hostel warden shall assist the students for repairs in the respective rooms. The Warden should be informed if there is any repair to be carried out in written form through the prefect.

PERSONAL PROPERTY

- a) Each student shall safeguard their belongings and shall be responsible for their personal property.
- b) Wardens may ask the students to shift their belongings/ vacate the room for maintenance work/ during an emergency/ during vacation.
- c) Use of equipment such as electric heaters, video systems, loud speakers, etc. is strictly prohibited inside the hostel rooms. Any defaulters, if found, shall be levied a fine of Rs. 200.00/- (Rupees Two Hundred Only) for first time

offender and expulsion beyond that.

ENERGY CONSERVATION

Conservation of energy and resources is a major concern of the University.

- a) Lights and fans must be switched off at all times when no one is in the room.
- b) Electrical problems in the room should be reported immediately to the Warden.
- c) Water taps must be turned off when they are not in use.

CLEANLINESS

- a) Hostellers shall be responsible for the cleanliness of their respective room and the premises. Rooms must be kept clean and tidy for health and safety reasons.
- b) Students are advised not to leave any items like paper, covers of toilet soap, sanitary napkins etc. in the bathrooms. Any form of waste should not be flushed down the toilet and should be disposed properly.
- c) Students should participate in mass social work from time to time as per the instruction laid down by the prefect or warden as initiative of Swaach Bharat. Hostellers not participating shall be levied a fine of Rs.100.00/- (Rupees One Hundred Only) per person.

GENERAL DISCIPLINE

- a) Ragging is strictly Prohibited and anyone found guilty shall be punished as per rules and regulations laid down by the Supreme Court of India.
- b) Students are not allowed to stay in the hostel during the class hours unless it is unavoidable due to illness or any other valid reason.
- c) Students who wish to stay back in the hostel during semester break with proper justification should take prior permission from the warden.
- d) If the student decides to leave the hostel they should inform the warden.
- e) The hostellers are not permitted to stay out of the hostel beyond the closing time. A student requiring staying beyond the closing time must obtain proper authorization from Hostel Warden.
- f) Prefects along with assistant prefect of the respective hostels shall take attendance at 8:00 PM everyday and submit the weekly attendance report to the warden every Monday.
- g) Any Hostellers wishing to stay out for the night/ weekend should submit an application to the Warden for permission. For girls, consent of the Guardian/ Parents must be communicated to the concerned Warden. Such permission shall be given once in a month for a maximum period of two nights only, preferably during weekends. No student shall leave the hostel without prior permission of the hostel warden.
- h) Any Hosteller staying out of Hostel without obtaining prior permission from the Warden shall be liable to disciplinary action and expulsion. The first offence of this nature, if supported by satisfactory explanation verified from the Parent/ Local guardian, may be considered after imposing a fine of Rs 200.00/- (Rupees Two Hundred Only). However, a repetition of the same offence shall result in expulsion.
- i) In case a student requires hospitalization, His/ her parents/ guardian must be informed. Parents / guardian are required to communicate to the concerned Warden in this regard.
- j) Students shall inform the warden for any extension of leave though verbal or written communication.
- k) Students should refrain from any activity that is likely to infringe on the privacy of others or interfere with their studies.
- The Warden/ Institute/ Hostel authorities shall conduct surprise checks periodically and if anyone is found violating the above rules, disciplinary action shall be taken against the defaulter. The hostel rooms are subject to inspection by the Institute/ Hostel authorities to make sure that they are kept neat and tidy. Unauthorized items like liquor, drugs, lethal weapons etc., are prohibited within the hostel premises.

- m) Students are prohibited from consuming alcoholic drinks, drugs, cigarettes, tobacco products or any other intoxicants inside the hostel and are strictly prohibited from entering the hostel after consuming such items. Consumption of prohibited items shall be liable for strict disciplinary action, including expulsion/rustication from Hostel/ Institute.
- n) No Parent/ Guardian/ Visitor of a student shall be allowed to stay in their room without permission from the warden. Visitors are allowed to visit students in their common rooms, except in the girl's hostel. No hosteller is allowed to permit any visitor of the opposite sex in their room. If any visitor of the opposite sex is found, they shall be expelled from the institution without any warning.
- o) No party/ social gathering shall be allowed within the premises of the hostel unless prior permission is taken from the Warden/ Campus in charge.
- p) Study hour shall be strictly maintained for the welfare of all the students in the hostel. Students shall not visit rooms of other students after 8:00 PM.
- q) Students who are detained from the college are not entitled to stay in the hostel and hence shall not be granted Hostel admission. However, depending on the availability of seats, the warden may admit the detained students based on their performance after full payment of hostel admission fee.
- r) A detained scholar under special circumstances may be permitted to stay in the hostel for a maximum period of 1 month during examination time based on the availability of seat. Permission shall be granted based on the recommendation from the department HOD and with the knowledge of the parents. Students can write an application for such stay to the Warden. They have to pay Mess Fee to the Mess in-charge on the basis of daily rate prevailing at the time of applying. During the stay in the hostel the student should strictly adhere to the rules and regulations of the hostel.

MESS RULES

- a) The term of Prefect and assistant prefect shall be 1 year only.
- b)The term for Mess manager and assistant mess manager shall be 3 months only.
- c) The Prefect and Mess manager shall be entitled to 100% concession in mess fee for the extra responsibility they perform during their tenure.
- d)Every hosteller shall join the hostel mess. Meals/ food should not be cooked in the individual room. The timing of the mess shall be
 - i) Morning: 7:00-8:30 A.M
 - ii) Evening: 5:00-7:00 P.M.
- e) All hostellers must pay the mess fees before 10th of every month. Defaulters shall be charged fine of Rs.50.00/-(Rupees Fifty Only) per day till 15th of the month. After the 15th day it shall be Rs.100.00/- (Rupees One Hundred Only) per day. Habitual offender shall be expelled from the hostel after recovering the due amount.
- f) Audit of the mess account should be carried out at the end of every month. The audit committee shall consist of Prefect (convener), mess manager (Secretary) and one representative from every batch of students, the warden shall be part of the committee from time to time. The batch representative shall be rotated every month. The audit report should be submitted to the warden every month.
- g) If a student is on leave from the hostel for continuously more than 10 days he/ she can apply for deduction in the mess fee. This rule shall apply only to those who take leave as per the procedure.

9. DEPARTMENTS

9.1. DEPARTMENT OF AGRICULTURAL ENGINEERING AND TECHNOLOGY

Department In-charge: **Dr. Pramod Ch Dihingia** E-mail: **pramod@nagalanduniversity.ac.in**

The Department of Agricultural Engineering and Technology focuses and deals with the use of engineering tools and practices to solve the real world problem of crop production, handling and processing problems for food and fiber industry. "Everything else can wait but not Agriculture" with this famous motto, the department envisages to solve the problem with the application of scientific knowledge in diverse and multi-disciplinary activities for overall development of farming community and better livelihood.

The Agricultural Engineering Department of the school came into existence in 2008. The department follows four years degree course as adopted by the school.



Core field of Agricultural Engineering and Technology

- Soil and Water Engineering,
- Farm Power and Machinery Engineering
- Processing and Food Engineering
- Other interdisciplinary field.

AIMS AND OBJECTIVES:

- To provide scientific knowledge to increase agricultural production and productivity through better management of land and water resources
- To encourage the design and use of appropriate and more efficient agricultural machinery,
- To provide better techniques of post-harvest technology
- To design improved methods of processing and preservation of foods.

LABORATORIES OF AGRICULTURAL ENGINEERING AND TECHNOLOGY

- Agricultural Engineering Computing Lab
- Land and Water Engineering and Management Lab
- Farm Power and Machinery Engineering Lab
- Processing and Food Engineering Lab
- Engineering Workshop Lab (Common for all the branches)

TO DEVELOP THEIR SELF-CONFIDENCE TO HANDLE TECHNICAL MATTERS (MANDATORY FOR THE AWARD OF DEGREE):

- Industrial training for 30 days during pre-final year.
- Opportunity to do research through final year project.
- Poster Presentation
- Class presentation (PPT)
- Industrial Workshop Visit (FMP, SWE, PFE related)

TEACHING FACULTY

| SL. NO | NAME OF THE FACULTY | DESIGNATION |
|--------|-------------------------|---------------------|
| 1 | Dr. Chitrasen Lairenjam | Assistant Professor |
| 2 | Mr. Wungshim Zimik | Assistant Professor |
| 3 | Dr. Pramod Ch Dihingia | Assistant Professor |
| 4 | Ms. Sentirenla pongen | Guest Faculty |
| 5 | Mr. Imliwapang Jamir | Guest Faculty |
| 6 | Ms. Anupama Sinha | Guest Faculty |

9.2. DEPARTMENT OF BIOTECHNOLOGY

Department Incharge: Dr. Imlitoshi Jamir

E-mail: imlitoshi@nagalanduniversity.ac.in

The Department is presently offering B.Tech. Biotechnology course, a four years degree programme under which the students will. be taught on broad range of subjects related to Genetics, Microbiology, Molecular Biology, Bioenergetics, Tissue culture, Recombinant DNA Technology, Bioinformatics, Chemical engineering and Bioprocess engineering etc. The Department already has a Biotechnology lab which is equipped with modern biotechnological tools like PCR Thermal Cycle, Horizontal Electrophoresis Systems, Vertical Slab Gel Systems (Mini model), Vertical Slab Gel Systems (Slab Gel Regular Model), Transilluminator, Horizontal air flow cabinet, cold centrifuge, Distillation unit, Milipore water system, UV-visible spectrophotometer, Malvern zetasizer S90, etc. The Department has completed three projects sponsored by Department of Biotechnology, Government of India.



LABORATORY

- Watson Molecular Biology Lab
- JC Bose Plant Tissue Culture Lab
- Dayhoff Bioinformatics Lab
- Pasteur Microbiology Lab

- Mendel Genetics Lab
- Biochemical Engineering Lab (Under construction)

THRUST AREA OF RESEARCH:

- Molecular characterization of Vibrio cholerae transcription factors and also on the gene regulation of Vibrio cholerae.
- Characterization and application of Mithun (Bosfrontalis) Milk protein.
- Development of advance drug delivery system.

TEACHING FACULTY

| SL. NO. | NAME OF THE FACULTY | DESIGNATION |
|---------|----------------------------|---------------------|
| 1 | Dr. Imlitoshi Jamir | Assistant Professor |
| 2 | Dr. Rajkrishna Mondal | Assistant Professor |
| 3 | Dr. Hanumant Singh Rathore | Assistant Professor |
| 4 | Ms. Liyani Merry | Assistant Professor |
| 5 | Ms. Lolenmenla Imchen | Assistant Professor |

9.3. DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Department Incharge : Mr. Akangjungshi Longkumer

Department of Computer Science & Engineering emphasizes on the all-round development of the student, both in the theoretical and practical knowledge. The Department also takes special care in developing problem solving attitude in students and prepare them to be mentally equipped to join any organization.



VISION:

- To be a front runner in Technology.
- The Department not only aims to produce industry ready graduates but also entrepreneurs.

THRUST AREAS:

- Multimedia
- Web Technology
- System Software
- Wireless Technology
- Networking
- Software Engineering
- Distributed Systems

• Operating System

TEACHING FACULTY

| SL. NO | NAME OF THE FACULTY | DESIGNATION |
|--------|----------------------------|---------------------|
| 1 | Mr. Chenlep Yakha Konyak | Assistant Professor |
| 2 | Mr. Akangjungshi Longkumer | Assistant Professor |
| 3 | Mr. Ramesh Singh | Assistant Professor |
| 4 | Mrs. Yanthungbeni Humtsoe | Guest Faculty |
| 5 | Mr. Imlitoshi Jamir | Guest Faculty |
| 6 | Mr. Aosungkum | Guest Faculty |
| 7 | Ms. Khriemeno Nakhro | Guest Faculty |

9.4. DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Department In-charge: Mrs. Ayangla Jamir E-mail: ayanglajamir@nagalanduniversity.ac.in

Electronics & Communication Engineering is about electronic components, integrated circuits, microprocessors and consists of designing, fabrication, testing, maintaining and supervising the manufacture of electronic equipments. The Department of Electronics and Communication Engineering focuses to impart education and training at the Under-graduate levels with special emphasis on design aspects of electronic systems. The training imparted to the students would be such that it will make them competent enough to be the fountain head of new ideas and innovations in Science and Technology and who shall contribute its growth in partnership with industries and develop and harness it for the welfare of the Nagas and the nation.



VISION:

To bring about a cultural revolution through digital technology and demonstrate the spirit of sharing, and caring by people who will create, collaborate and make Nagaland a better knowledgeable State.

THRUST AREA OF RESEARCH

- Integrated electronics and circuits
- Tele-communication
- Computer technology
- Power electronics
- GPS systems
- Communication Systems
- Antennas
- Satellite transponders
- Signal processing based biomedical instruments
- VLSI chips

TEACHING FACULTY

| SL. NO | NAME OF THE FACULTY | DESIGNATION |
|--------|-----------------------------|---------------------|
| 1 | Mrs. Ayangla Jamir | Assistant Professor |
| 2 | Mrs. Bendangchila Longkumer | Assistant Professor |
| 3 | Ms. Imesangla Ao | Assistant Professor |
| 4 | Ms. Merensongla Aier | Guest Faculty |
| 5 | Ms. Imtinungla Longkumer | Guest Faculty |
| 6 | Ms. Monalita Sonar | Guest Faculty |

9.5. DEPARTMENT OF INFORMATION TECHNOLOGY

Department In-charge: **Mr. Sourav Hazarika** E-mail: **sourav@nagalanduniversity.ac.in**

The Department of Information Technology focuses in training students in the creation of Computer Based Information Systems for efficient storage, processing, analyzing and dissemination of information to cater to the needs of the people in making decision making process more effective.



VISION:

Information Technology has been the driving force for economic growth which has uplifted many all around the world. For reasons best known, Nagaland as such has not benefited by this economic growth. The Department of Information Technology, Nagaland University endeavors to bridge this gap which hopes to reduce the digital divide and hopefully bring about economic growth to the people of Nagaland in the near future. It is hoped that a new way of work culture will emerged in the state through IT. Our students will play an effective role as Technologists and make notable contribution to the development of our society.

THRUST AREAS OF RESEARCH:

- Information Systems Development
- Computer Networks
- Distributed Systems
- Web Technology
- Programming
- Image Processing
- Knowledge Representation
- Artificial Neural Networks
- Ontology Dynamic

OBJECTIVES: JECTIVES:

- To foster innovative thinking among the students in the field of IT
- To orient students with the skills required in IT industry

- To motivate students in the field of research
- To equip the students with cutting edge IT Technologies

POSITION OF TEACHING FACULTY

| SL. NO | NAME OF THE FACULTY | DESIGNATION |
|--------|-------------------------|---------------------|
| 1 | Mr. Shanchamo Yanthan | Assistant Professor |
| 2 | Mr. Teisovi Angami | Assistant Professor |
| 3 | Mr. Sudipta Patowary | Assistant Professor |
| 4 | Mr. Sourav Hazarika | Assistant Professor |
| 5 | Dr. Heisnam Rohen Singh | Assistant Professor |
| 6 | Ms. Noktienla Aier | Guest Faculty |

9.6 COMMON POOL

In-charge: Mr. Ramesh Singh E-mail: ramesh@nagalanduniversity.ac.in

The School of Engineering & Technology has a Common Pool section which teaches the common Engineering courses like Engineering Mathematics, Physics, Chemistry, Basic Electronics, Basic Electricals, Engineering Mechanics etc. The Common Pool section has a computer lab with a capacity of 30 computers to conduct practical courses for the First Year students. The Central Workshop offers practical courses like welding, fitting, carpentry, sheet metal etc. in the First Year Engineering as well as for other semesters in the Agricultural Engineering & Technology Department.



LABORATORY:

- Physics Lab
- Chemistry Lab
- Engineering Drawing Lab
- Workshop
- Computer Lab for programming and Internet

POSITION OF TEACHING FACULTY

| SL. NO | NAME OF THE FACULTY | SPECIALIZATION |
|--------|--------------------------|------------------------|
| 1 | Dr. Pelesakuo Kehie | Chemistry |
| 2 | Ms. Yasmin Choudhry | Physics |
| 3 | Dr. Sanjay Sarkar | Mathematics |
| 4 | Mr. Maongtemsu Pongener | Mechanical Engineering |
| 5 | Mr. Binay Kumar Yadav | Electrical engineering |
| 6 | Ms. P. Lipoktola Imechen | English |

10. COURSE STRUCTURE

10.1. B.TECH. FIRST YEAR (COMMON TO ALL DISCIPLINE)

| SL/ | Subject | | Contac | Contact hours per week | | | |
|-----|---------|------------------------------|--------|------------------------|-----------|---------|--|
| No | Code | Course Name | L | Т | Р | Credits | |
| The | ory | | | | | | |
| 1 | G1T01 | Engineering Mathematics-I | 3 | 1 | - | 4 | |
| 2 | G1T02 | Engineering Physics-I | 3 | - | - | 3 | |
| 3 | G1T03 | Technical English | 2 | 1 | - | 3 | |
| 4 | G1T04 | Basic Electrical Engineering | 3 | - | - | 3 | |
| 5 | G1T05 | Engineering Chemistry | 3 | - | - | 3 | |
| 6 | G1T06 | Engineering Graphics | 1 | - | - | 1 | |
| | | | | Tota | l Theory | 17 | |
| Pra | ctical | | | | | | |
| 1 | G1L01 | Engineering Physics-I Lab | - | - | 2 | 1 | |
| 2 | G1L02 | Engineering Chemistry Lab | - | - | 2 | 1 | |
| 3 | G1L03 | Engineering Graphics Lab | - | - | 4 | 1 | |
| | | | | Total | Practical | 4 | |
| | | | | 21 | | | |

2nd SEMESTER

| SL/ | Subject | a v | Contact | hours per w | eek | | | |
|------|-------------------|-------------------------------|----------------|-------------|-----------|---------|--|--|
| No | Code | Course Name | L | Т | Р | Credits | | |
| The | ory | | _ | _ | _ | _ | | |
| 1 | G2T01 | Engineering Mathematics-II | 3 | 1 | - | 4 | | |
| 2 | G2T02 | Engineering Physics-II | 3 | - | - | 3 | | |
| 3 | G2T03 | Fundamentals of Computing | 3 | - | - | 3 | | |
| 4 | G2T04 | Basic Electronics | 3 | - | - | 3 | | |
| 5 | G2T05 | Engineering Mechanics | 2 | 1 | - | 3 | | |
| 6 | G2T06 | Environmental Science | 3 | - | - | 0 | | |
| | | | | Total | Theory | 16 | | |
| Prac | ctical | | | | | | | |
| 1 | G2L01 | Workshop Practice | - | - | 4 | 2 | | |
| 2 | G2L02 | Basic Electronics Lab | - | - | 2 | 1 | | |
| 3 | G2L03 | Fundamentals of Computing Lab | - | - | 2 | 1 | | |
| 4 | G2L04 | Engineering Physics-II Lab | - | - | 2 | 1 | | |
| | | | | Total | Practical | 5 | | |
| | Total of Semester | | | | | | | |
| | | 1 st SFMFST | TD | | | | | |

1st SEMESTER

10.2 AGRICULTURAL ENGINEERING AND TECHNOLOGY (THIRD SEMESTER ONWARDS] SECOND YEAR

3rd SEMESTER SL/ Contact hours per week Subject Course Name Credits No Code L Т Р Total Theory MAT3T1 Mathematics – III 3 AE3T01 Strength of Material AE3T02 Soil Mechanics AE3T03 Farm Power AE3T04 Electrical Machine & Power utilization 2 2 2 Engineering properties of Biological AE3T05 2 6 2 Material & Food Quality 2 2 AE3T06 Machine drawings & Computer graphics Total Theory 18 18 Practical AE3L01 Soil Mechanics Lab 2 2 AE3L02 Farm Power Lab 2 Engineering properties of Biological 2 2 _ AE3L03 Material & Food Quality Lab Machine drawing & Computer 2 _ AE3L04 graphics lab **Total Practical** 8 4 **Total of Semester** 26 22

| | 4 ^m SEMESTER | | | | | | | | |
|-----------------|-------------------------|--------------------------------|------|-----------|---------|-------|---------|--|--|
| SL/ | Subject | | Cont | tact hour | s per w | eek | | | |
| No | Code | Course Name | L | Т | Р | Total | Credits | | |
| Theo | | | L | 1 | 1 | Total | | | |
| 1 | AE4T01 | Surveying and Leveling | 2 | - | - | 2 | 2 | | |
| 2 | AE4T02 | Theory of Machines | 2 | 1 | | 3 | 3 | | |
| 3 | AE4T03 | Design of structures | 2 | - | | 2 | 2 | | |
| 4 | AE4T04 | Watershed hydrology | 2 | 1 | | 3 | 3 | | |
| 5 | AE4T05 | Fluid Mechanics | 2 | 1 | | 3 | 3 | | |
| 6 | AE4T06 | Crop Process Engineering | 3 | - | | 3 | 3 | | |
| 7 | AE4T07 | Engineering Thermodynamics and | 2 | - | | 2 | 2 | | |
| | | Heat Engine | | | | | | | |
| | | | | Total | Theory | 18 | 18 | | |
| Prac | tical | | | | | | | | |
| 1 | AE4L01 | Watershed Hydrology -Lab | | - | 2 | 2 | 1 | | |
| 2 | AE4L02 | Crop Process Engineering Lab | | - | 2 | 2 | 1 | | |
| 3 | AE4L03 | Surveying and Leveling Lab | | - | 2 | 2 | 1 | | |
| Total Practical | | | | | | | 3 | | |
| | | | Tota | l of Sem | lester | 24 | 21 | | |

THIRD YEAR 5th SEMESTER

| SL/ | Subject | Course Name | С | ontact hou | rs per w | veek | Credits |
|-----|---------|---------------------------------------|----|------------|----------|-------|---------|
| No | Code | Course Name | L | Т | Р | Total | Credits |
| The | ory | | | | | | |
| 1 | AE5T01 | Workshop Technology | 2 | - | | 2 | 2 |
| 2 | AE5T02 | Machine Design | 2 | - | | 2 | 2 |
| 3 | AE5T03 | Heat & mass Transfer | 2 | - | | 2 | 2 |
| 4 | AE5T04 | Farm Machinery & Equipment | 3 | - | | 3 | 3 |
| 5 | AE5T05 | Ground Water, Wells & Pumps | 2 | - | | 2 | 2 |
| 6 | AE5T06 | Drying & Storage Engineering | 3 | - | | 3 | 3 |
| 7 | AE5T07 | Soil & water Conservation Engg. | 3 | - | | 3 | 3 |
| | | | | Total | Theory | 17 | 17 |
| Pra | ctical | | | | | | |
| 1 | AE5L01 | Farm Machinery & Equipment Lab | - | - | 2 | 2 | 1 |
| 2 | AE5L02 | Ground Water, Wells & Pumps Lab | - | - | 2 | 2 | 1 |
| 3 | AE5L03 | Drying & storage engineering Lab | - | - | 2 | 2 | 1 |
| 4 | | Soil & Water conservation Engineering | | | 2 | 2 | 1 |
| _ | AE5L04 | | | | 2 | 2 | 1 |
| | | Lab | | | | | |
| | | | | Total Pra | actical | 8 | 4 |
| | | | To | tal of Sen | nester | 25 | 21 |

| | | U BEMESTER | | | | | |
|-----|---------|--|-----------------|----------|----------|-------|---------|
| SL/ | Subject | | Con | tact hou | rs per w | veek | |
| No | Code | Course Name | L | Т | Р | Total | Credits |
| The | ory | | | | | | |
| 1 | AE6T01 | Agriculture for Engineers | 3 | | | 3 | 3 |
| 2 | AE6T02 | Refrigeration & Air conditioning | 2 | 1 | | 3 | 3 |
| 3 | AE6T03 | Transfer Process in Food Engineering | 3 | 0 | | 3 | 3 |
| 4 | AE6T04 | Tractor systems & controls | 2 | | | 2 | 2 |
| 5 | AE6T06 | Irrigation and Drainage Engineering -I | 2 | | | 2 | 2 |
| 6 | AE6EL | Elective-I* | 3 | | | 3 | 3 |
| | | | | Total | Theory | 16 | 16 |
| Pra | ctical | | | | | | |
| 1 | AE6L01 | Tractors systems & controls Lab | - | | 2 | 2 | 1 |
| 2 | AE6L02 | Irrigation and Drainage Engineering I Lab | - | | 2 | 2 | 1 |
| | | | Total Practical | | | 4 | 2 |
| | | | Total o | of Seme | ster | 20 | 18 |

6th SEMESTER

Elective papers-I*

1. (AE6EL01) Agribusiness management and trade.

2. (AE6EL02) Entrepreneurship development and communication skills.

3. (AE6EL03) Design and maintenance of green house.

4. (AE6EL04) Soil and Water Conservation Structure

7th SEMESTER SL/ Subject Contact hours per week Course Name Credits No Code L Т Р Total Theory 2 **AE7T01** Irrigation and Drainage Engineering -II 2 AE7T02 2 Mechanics of Tillage & Traction Unit Operation in Dairy and Food 2 2 2 AE7T03 Engineering 2 2 2 AE7T04 Statistical Hydrology 2 AE7T05 Industrial Training 8 6 AE7T06 Project - I AE7EL Elective-II* 21 17 Total Theory Practical AE7L01 Mechanics of Tillage & Traction Lab 2 2 1 Unit Operation in Dairy and Food 2 2 2 AE7L02 Engineering Lab 2 **Total Practical** 4 Total of Semester 25 19

Elective papers-II*

1. (AE7EL01) Remote sensing and GIS application.

2. (AE7EL02) Tea Technology.

3. (AE7EL03) Development of processed products and equipment.

4. (AE7EL04) Waste and by-product utilization.

5. (AE7EL05) Food Processing Plant Design & Layout

8th SEMESTER

| SL/ | Subject | ~ | Con | tact ho | urs per | week | 0 |
|-------------------|---------|--|-----|---------|---------|-------|---------|
| No | Code | Course Name | L | Т | Р | Total | Credits |
| Theo | ory | | | | | | |
| 1 | AE8T01 | Tractor Design & Testing | 2 | - | - | 2 | 2 |
| 2 | AE8T02 | Food Process and Packaging Technology | 3 | | - | 3 | 3 |
| 3 | AE8T03 | Watershed planning & Management | 2 | - | - | 2 | 2 |
| 4 | AE8T04 | Project - II | - | | 8 | 8 | 4 |
| 5 | AE8EL | Elective – III* | 3 | | - | 3 | 3 |
| 6 | G8T01 | Indian Constitution | 3 | | - | | NC |
| | | | | Total | Theory | 21 | 14 |
| Prac | tical | | | | | | |
| 1 | AE8L01 | Tractor design & testing Lab | - | | 2 | 2 | 1 |
| 2 | AE8L02 | Food Process and packaging technol- ogy Lab | - | | 2 | 2 | 1 |
| 3 | AE8L03 | Seminar | - | | 2 | 2 | 1 |
| Total Practical | | | | | 6 | 3 | |
| Total of Semester | | | | | 27 | 17 | |

Elective papers-III*

- 1. (AE8EL01) Human Engineering and safety.
- 2. (AE8EL02) Biomass management for fodder and energy.
- 3. (AE8EL03) Production technology of agricultural machines.
- 4. (AE8EL04) Renewable Energy Source
- 5. (AE8EL05) Organic Farming for Sustainable Agricultural Production.

TOTAL CREDITS = 42+118=160

10.3 BIOTECHNOLOGY (THIRD SEMESTER ONWARDS) SECOND YEAR

3rd SEMESTER

| SL/ | Subject | | Con | Contact hours per week | | | |
|-------------------|---------|---------------------------------|-----|------------------------|--------|-------|---------|
| No | Code | Course Name | L | Т | Р | Total | Credits |
| Theo | ory | | | | | | |
| 1 | BT3T01 | Biostatistics | 3 | - | - | 3 | 3 |
| 2 | BT3T02 | Biochemistry | 3 | - | - | 3 | 3 |
| 3 | BT3T03 | Microbiology | 3 | | - | 3 | 3 |
| 4 | BT3T04 | Thermodynamics and Kinetics | 3 | | - | 3 | 3 |
| 5 | CSB302 | Data Structures & algorithm | 3 | | - | 3 | 3 |
| | | | | Total | Theory | 15 | 15 |
| Prac | tical | | | | | | |
| 1 | BT3L01 | Biochemistry Lab | | | 4 | 4 | 2 |
| 2 | BT3L02 | Microbiology Lab | | | 4 | 4 | 2 |
| 3 | CSB312 | Data Structures & algorithm Lab | | | 3 | 3 | 1.5 |
| Total Practical | | | | | | 11 | 5.5 |
| Total of Semester | | | | | | | 20.5 |

4th SEMESTER

| SL/ | Subject | | Con | Contact hours per week | | | | |
|-----------------|---------|--------------------------------|------|------------------------|--------|-------|---------|--|
| No | Code | Course Name | L | Т | Р | Total | Credits | |
| Theo | ory | | | | | | | |
| 1 | BT4T01 | Cellular Metabolism | 3 | - | - | 3 | 3 | |
| 2 | BT4T02 | Cell and Developmental Biology | 3 | - | - | 3 | 3 | |
| 3 | BT4T03 | Molecular Biology | 3 | - | - | 3 | 3 | |
| 4 | BT4T04 | Genetics | 3 | - | - | 3 | 3 | |
| 5 | AE4T05 | Fluid Mechanics | 2 | - | - | 3 | 3 | |
| | | | | Total | Theory | 15 | 15 | |
| Prac | tical | | | | | | | |
| 1 | BT4L01 | Molecular Biology Lab | | - | 4 | 4 | 2 | |
| 2 | BT4L02 | Fluid Mechanics Lab | | - | 2 | 2 | 1 | |
| Total Practical | | | | | | 6 | 3 | |
| | | | Tota | l of Sem | lester | 21 | 18 | |

THIRD YEAR

| | | 5 SEMESTER | | | | | |
|-------------------|-----------------|---------------------------------|-----|----------|----------|-------|---------|
| SL/ | Subject | | Con | tact hou | rs per w | veek | |
| No | Code | Course Name | L | Т | Р | Total | Credits |
| No | Code | | L | 1 | r | Total | |
| Theorem | ry | | | | | | |
| 1 | BT5T01 | Biophysics | 3 | - | - | 3 | 3 |
| 2 | BT5T02 | Enzyme Technology | 3 | | | 3 | 3 |
| 3 | BT5T03 | Immunology | 3 | | | 3 | 3 |
| 4 | BT5T04 | Plant Biotechnology | 3 | | | 3 | 3 |
| 5 | ITB502 | Database Management Systems | 3 | | | 3 | 3 |
| | | | | Total | Theory | 15 | 15 |
| Pract | ical | | | | | | |
| 1 | BT5L01 | Plant Biotechnology-Lab | - | | 4 | 4 | 2 |
| 2 | BT5L02 | Immunology Lab | - | | 2 | 2 | 1 |
| 3 | ITB511 | Database Management Systems Lab | - | | 3 | 3 | 1.5 |
| | Total Practical | | | | | | 4.5 |
| Total of Semester | | | | | 24 | 19.5 | |

5th SEMESTER

6th SEMESTER

| SL/ | Subject Code | Code Course Name | | Contact hours per week | | | | |
|-------------------|------------------|-----------------------------------|---|------------------------|--------|-------|---------|--|
| No | Subject Code | | L | Т | P | Total | Credits | |
| Theor | y | | | | | | | |
| 1 | BT6T01 | Recombinant DNA Technology and | 3 | | - | 3 | 3 | |
| | | Applications | | | | | | |
| 2 | BT6T02 | Bioinformatics | 3 | | - | 3 | 3 | |
| 3 | BT6T03 | Heat and Mass Transfer | 3 | | - | 3 | 3 | |
| 4 | BT6T04 | Production and operations manage- | 3 | | - | 3 | 3 | |
| | | ments | | | | | | |
| 5 | BT6E01/02/0 3 | Elective-I* | 3 | | - | 3 | 3 | |
| | | | | Total | Theory | 15 | 15 | |
| Practi | ical | | | | | | | |
| 1 | BT6L01 | Bioinformatics Lab | - | | 2 | 2 | 1 | |
| 2 | BT6L02 | Recombinant DNA Technology Lab | - | | 4 | 4 | 2 | |
| Total Practical | | | | | | | 3 | |
| Total of Semester | | | | | | | 18 | |

*Elective-I:

- 1. Stem cell in health care
- Bio-pharmaceutical technology
 Proteomics and Genomics

FOURTH YEAR

7th SEMESTER

| SL/ | | | Cont | act hou | rs per w | veek | a ii |
|-----------------|-------------------|--|------|---------|----------|-------|---------|
| No | Subject Code | Course Name | L | Т | P | Total | Credits |
| Theo | ory | | | | | | |
| 1 | BT7T01 | Food Biotechnology | 3 | - | - | 3 | 3 |
| 2 | BT7T02 | Pollution Control & Environmental | 3 | | | 3 | 3 |
| | | Biotechnology | | | | | |
| 3 | BT7T03 | Bioreactor Design and Analysis | 3 | - | - | 3 | 3 |
| 4 | BT7T04 | Animal Biotechnology | 3 | | | 3 | 3 |
| 5 | BT7E01/02/03 | Elective-II* | 3 | | | 3 | 3 |
| | | | | Total | Theory | 15 | 15 |
| Prac | tical | | | | | | |
| 1 | BT7L01 | Food Biotechnology Lab | | | 2 | 2 | 1 |
| 2 | BT7L02 | Biochemical Lab | | | 4 | 4 | 2 |
| 3 | BT7P01 | Mini project Seminar (Review and presentation) | | | | | 1 |
| 4 | BT7L03 | Colloquium | - | - | - | - | 1 |
| Total Practical | | | | | | | 5 |
| | Total of Semester | | | | | | 20 |

Elective-II*

- 1. Therapeutic hormone and growth factor
- 2. Industrial biotechnology
- 3. Microbial process engineering

8th SEMESTER

| SL/ | | | Con | ntact hours per week | | | | | |
|-------------------|--------------|--|-----|----------------------|---------|-------|---------|--|--|
| No | Subject Code | Course Name | L | Т | Р | Total | Credits | | |
| Theo | ory | | | | | | | | |
| 1 | BT8T01 | Biosafety, Bioethics and Intellectual property rights in Biotechnology | 3 | - | | 3 | 3 | | |
| 2 | BT8T02 | Agricultural Biotechnology | 3 | - | | 3 | 3 | | |
| 3 | BT8E03 | Elective-III* | 3 | - | | 3 | 3 | | |
| 4 | G8T01 | Constitution of India | 3 | - | | 3 | 0 | | |
| | | | • | Total | Theory | 12 | 9 | | |
| Pract | tical | | | | | | | | |
| 1 | BT8P02 | Project | | - | 20 | 20 | 10 | | |
| | | | Т | 'otal Pra | nctical | 20 | 10 | | |
| Total of Semester | | | | | | | | | |

- Elective-III*
 - 1. Diagnostic Techniques
 - 2. Bio analytical Techniques
 - 3. Protein Modeling

29

10.4 COMPUTER SCIENCE & ENGINEERING (THIRD SEMESTER ONWARDS)

Contact hours per SL/ Subject Code Course Name Credits week No L Г Р Theory CSB301 **Object Oriented Programming** 2 0 0 CSB302 Data Structures & Algorithm CSB303 Computer Graphics & Virtual Reality 0 4 0 MAT3T2 **Differential Calculus** 0 5 EC3T03 Digital Electronics & Logic Design Practical CSB311 Object Oriented Programming Lab 3 1.5 3 2 CSB312 Data Structures & Algorithm Lab 1.5 3 EC3L02 Digital Electronics & Logic Design Lab 3 1.5 2 20.5 14 9 **Total Credits**

SECOND YEAR

3rd SEMESTER

4th SEMESTER

| | | | Contact | hours per | | | |
|------|---------------|--|---------|-----------|---|-----|--|
| SL/ | Subject Code | Course Name | | week | | | |
| No | | | L | Г | Р | | |
| Theo | ory | | | | | | |
| 1 | CSB401 | Design & Analysis of Algorithms | 3 | 0 | 0 | 3 | |
| 2 | CSB402 | Web & Internet | 3 | 0 | 0 | 3 | |
| 3 | CSB403 | Formal Language & Automata Theory | 3 | 0 | 0 | 3 | |
| 4 | CSB404 | Computer Organization & Architecture | 4 | 0 | 0 | 4 | |
| 5 | MAT4T2 | Discrete Mathematics | 3 | 1 | 0 | 4 | |
| Prac | tical | | | • | | | |
| 1 | CSB311 | Object Oriented Programming Lab | 0 | 0 | 3 | 1.5 | |
| 2 | CSB312 | Data Structures & Algorithm Lab | 0 | 0 | 3 | 1.5 | |
| 3 | EC3L02 | Digital Electronics & Logic Design Lab | 0 | 0 | 3 | 1.5 | |
| | Total Credits | | 16 | 1 | 8 | 21 | |

THIRD YEAR

5th SEMESTER Contact hours per SL/ Subject Code Course Name Credits week No Т Р L Theory CSB501 3 0 Graph Theory 0 0 0 CSB502 Operating System CSB503 0 Database Management Systems 0 CSB504 0 Software Engineering 0 MAT5T1 Numerical Analysis & Probability Practical CSB511 0 1.5 Software Engineering Lab CSB512 0 0 1.5 Operating System Lab CSB513 1.5 Database Management Systems Lab

6th SEMESTER

15

| SL/ | | | Contact | hours pe | r | | |
|------|---------------|---------------------------------------|---------|----------|---|---------|--|
| SL/ | Subject Code | Course Name | | week | | Credits | |
| No | | | L | Г | Р | | |
| Theo | ory | | | | | | |
| 1 | CSB601 | Compiler Design | 4 | 0 | 0 | 4 | |
| 2 | CSB602 | Computer Networks | 3 | 0 | 0 | 3 | |
| 3 | CSB62X | Elective-I | 3 | 0 | 0 | 3 | |
| 4 | CSB62X | Elective-II | 3 | 0 | 0 | 3 | |
| 5 | HSB601 | Project Management & Entrepreneurship | 2 | 0 | 0 | 2 | |
| Prac | tical | | | | | | |
| 1 | CSB611 | Computer Networks Lab | 0 | 0 | 3 | 1.5 | |
| 2 | CSB612 | Compiler Design Lab | 0 | 0 | 3 | 1.5 | |
| 3 | CSB613 | Application Programming Lab | 0 | 1 | 3 | 2.5 | |
| | Total Credits | | 15 | 1 | 9 | 20.5 | |

Total Credits

20.5

FOURTH YEAR 7th SEMESTER

| | | | Contact | t hours pe | er | |
|------|--------------|----------------------|---------|------------|----|---------------|
| SL/ | Subject Code | Course Name | | week | | Credits |
| No | | | L | Г | Р | |
| The | ory | | | | | |
| 1 | CSB701 | Distributed System | 3 | 0 | 0 | 3 |
| 2 | CSB702 | Machine Learning | 3 | 0 | 0 | 3 |
| 3 | CSB72X | Elective-III | 3 | 0 | 0 | 3 |
| 4 | CSB72X | Elective-IV | 3 | 0 | 0 | 3 |
| Prac | ctical | | | | | |
| 1 | CSB711 | Project-I # | 0 | 0 | 12 | 6 |
| 2 | CSB712 | Machine Learning Lab | 0 | 0 | 3 | 1.5 |
| 3 | CSB713 | Colloquium-I* | 0 | 0 | 0 | 0 (No credit) |
| Tota | al Credits | | 12 | 0 | 15 | 19.5 |

* The student will give presentation (Colloquium-I) on the summer/winter/industrial training (6 – 8 weeks) that She / He underwent during the vacation period after 5th or 6th semester. The credit(Pass or Fail) will be awarded in the 7th Semester under Colloquium-I. Presentation will be conducted in the beginning of 7th semester.

The student will submit a synopsis for their Project at the beginning of the semester in a specified format which should be approved by the departmental committee. The student will also have to present the progress of their project through seminars and progress reports

| 8 SEMESTER | | | | | | | | | | |
|------------------------|----------------------|-----------------------------------|---------|---------|------|---------------|--|--|--|--|
| at / | | | Contact | hours p | er | | | | | |
| SL/ | Subject Code | ect Code Course Name week Credits | | | week | | | | | |
| No | | | L | Т | Р | | | | | |
| The | ory | | | | | | | | | |
| 1 | CSB82X | Elective-V | 3 | 0 | 0 | 3 | | | | |
| 2 | CSB83X | Open Elective-I | 3 | 0 | 0 | 3 | | | | |
| 3 | G8T01 | Constitution of India | 3 | 0 | 0 | 0 (No credit) | | | | |
| 4 | HSB801 | Human Relations at work | 2 | 0 | 0 | 2 | | | | |
| Prac | tical | | | | | | | | | |
| 1 | CSB811 | Project-II | 0 | 0 | 16 | 8 | | | | |
| 1 | Fotal Credits | | 11 | 0 | 16 | 16 | | | | |

8th SEMESTER

Total Credits = 42+118= 160

| LIST OF ELECTIV | VE |
|-----------------|----|
|-----------------|----|

| SI. | OF ELECTIV | | | | | | Total |
|-----|-------------|----------|--------------------------------------|---|---|---|---------|
| 51. | Course Code | Semester | Course Title | L | Т | Р | Total |
| No. | Course Coue | | | | | | Credits |
| 1 | CSB621 | 6 | Data Mining | 3 | 0 | 0 | 3 |
| 2 | CSB622 | 6 | Data Analytics | 3 | 0 | 0 | 3 |
| 3 | CSB623 | 6 | Information Retrieval | 3 | 0 | 0 | 3 |
| 4 | CSB624 | 6 | Multimedia Technology | 3 | 0 | 0 | 3 |
| 5 | CSB625 | 6 | Software Testing | 3 | 0 | 0 | 3 |
| 6 | EC6T06 | 6 | Information Theory & Coding | 3 | 0 | 0 | 3 |
| 7 | EC8T01 | 6 | Digital Image Processing | 3 | 0 | 0 | 3 |
| 8 | MAT6T1 | 6 | Operations Research | 3 | 0 | 0 | 3 |
| | | | | | | | |
| 1 | CSB721 | 7 | Design & Management of Computer | 3 | 0 | 0 | 3 |
| 1 | CSD721 | / | Network | 5 | U | U | 5 |
| | C(1) 700 | | | | 0 | 0 | |
| 2 | CSB722 | 7 | Human Computer Interaction | 3 | 0 | 0 | 3 |
| 3 | CSB723 | 7 | Cloud Computing | 3 | 0 | 0 | 3 |
| 4 | CSB724 | 7 | Wireless Sensor Networks | 3 | 0 | 0 | 3 |
| 5 | CSB725 | 7 | Internet-of- Things | 3 | 0 | 0 | 3 |
| 6 | CSB726 | 7 | Real Time Systems | 3 | 0 | 0 | 3 |
| 7 | CSB727 | 7 | Advanced Computer Architecture & | 3 | 0 | 0 | 3 |
| | | | parallel pro-gramming | | | | |
| 8 | EC7EL1 | 7 | Embedded Systems & Design | 3 | 0 | 0 | 3 |
| | | | | | | | |
| 1 | CSB821 | 8 | Distributed Database | 3 | 0 | 0 | 3 |
| 2 | CSB822 | 8 | Artificial Intelligence | 3 | 0 | 0 | 3 |
| 3 | CSB823 | 8 | Speech & Natural Language Processing | 3 | 0 | 0 | 3 |
| 4 | CSB824 | 8 | Neural Networks & Deep Learning | 3 | 0 | 0 | 3 |
| | | | LIST OF OPEN ELECTIVE | | | | |
| 1 | CSB831 | 8 | Cryptography & Network Security | 3 | 0 | 0 | 3 |
| 2 | CSB832 | 8 | Mobile Applications & Services | 3 | 0 | 0 | 3 |
| 3 | CSB833 | 8 | Cyber Law & Ethics | 3 | 0 | 0 | 3 |
| 4 | CSB834 | 8 | Linux Internal | 3 | 0 | 0 | 3 |

The following courses will be offered through MOOCs/SWAYAM/NPTEL with in-house examination.

- 1. Embedded Systems
- 2. Software Testing
- 3. Artificial Intelligence
- 4. Internet-of-Things
- 5. Cryptography & Network Security

The following practical lab will be conducted under virtual lab.

- 1. Computer Organization & Architecture Lab
- 2. Software Engineering Lab

10.5. ELECTRONICS & COMMUNICATION ENGINEERING (THIRD SEMESTER ONWARDS)

| | | | 3 ⁻ Semester | | | | | |
|-------|---------|------|------------------------------------|---|---|---|-------------|----------|
| SL. | Subject | T | | T | T | D | C 11 | Contact |
| No. | Code | Туре | Course Name | L | T | Р | Credits | Hrs/Week |
| THE | CORY | | | | | | | |
| 1 | EC3T01 | PC | Network Theory | 3 | | | 3 | 3 |
| 2 | EC3T02 | PC | Electronic Devices & Circuits | 3 | | | 3 | 3 |
| 3 | EC3T03 | PC | Digital Electronics & Logic Design | 3 | | | 3 | 3 |
| 4 | EC3T04 | ES | Electrical Engineering Material | 2 | | | 2 | 2 |
| 5 | ITB303 | OE | Data Structures & Algorithm | 3 | | | 3 | 3 |
| 6 | MAT3T1 | BS | Mathematics-III | 3 | | | 3 | 3 |
| PR | ACTICAL | | | | | | | |
| 7 | EC3L01 | PC | Electronic Devices & Circuits Lab | - | | 2 | 1 | 2 |
| 8 | EC3L02 | PC | Digital Electronics & Logic Design | - | | 3 | 1.5 | 3 |
| | | 0.5 | Lab | | | | 1.5 | |
| 9 | ITB312 | OE | Data Structures Lab | - | - | 3 | 1.5 | 3 |
| Total | | | | | | | 21 | 25 |

SECOND YEAR

3rd Semester

| | 4 th Semester | | | | | | | | | | | |
|-------|--------------------------|------|--|---|---|---|---------|----------|--|--|--|--|
| SL. | Subject | Туре | Course Name | L | Т | Р | Credits | Contact | | | | |
| No. | Code | | | | | | | Hrs/Week | | | | |
| THE | THEORY | | | | | | | | | | | |
| 1 | EC4T01 | PC | Signals and Systems | 3 | | | 3 | 3 | | | | |
| 2 | EC4T02 | PC | Electromagnetic Field Theory | 3 | | | 3 | 3 | | | | |
| 3 | EC4T03 | PC | Microprocessor | 3 | | | 3 | 3 | | | | |
| 4 | EC4T04 | PC | Linear Integrated Circuits | 3 | | | 3 | 3 | | | | |
| 5 | EC4T05 | PC | Electronic Measurements & Instrumentation | 3 | | | 3 | 3 | | | | |
| 6 | MAT4T1 | BS | Mathematics –IV | 3 | | | 3 | 3 | | | | |
| PR | ACTICAL | | | | | | | | | | | |
| 7 | EC4L01 | PC | Microprocessor Lab | | | 3 | 1.5 | 3 | | | | |
| 8 | EC4L02 | PC | Linear Integrated Circuits Lab | | | 3 | 1.5 | 3 | | | | |
| Total | Fotal 21 24 | | | | | | | | | | | |

THIRD YEAR

5th Semester

| SL. | Subject | Tumo | Course Name | L | Т | Р | Credits | Contact |
|--------|---------|------|-------------------------------|---|---|---|---------|----------|
| No. | Code | Туре | | L | 1 | P | Credits | Hrs/Week |
| THEORY | | | | | | | | |
| 1 | EC5T01 | PE | Antenna & Wave Propagation | 3 | | | 3 | 3 |
| 2 | EC5T02 | PC | Introduction to VHDL | 3 | | | 3 | 3 |
| 3 | EC5T03 | PC | Analog Communication | 3 | | | 3 | 3 |
| 4 | EC5T04 | PC | Microcontroller | 3 | | | 3 | 3 |
| 5 | EC5T05 | PC | Control Systems | 3 | | | 3 | 3 |
| 6 | EC5T06 | OE | Management & Entrepreneurship | 3 | | | 3 | 3 |
| PR | ACTICAL | | | | | | | |
| 7 | EC5L01 | PC | Microcontroller Lab | | | 3 | 1.5 | 3 |
| 8 | EC5L02 | PC | VHDL Lab | | | 3 | 1.5 | 3 |
| Total | | | | | | | 21 | 23 |

| | 6 th Semester | | | | | | | | | | |
|-------|--------------------------|-------|--|---|---|---|---------|----------|--|--|--|
| SL. | Subject | Туре | Course Name | L | Т | Р | Credits | Contact | | | |
| No. | Code | 1 ypc | | Ľ | | 1 | Creans | Hrs/Week | | | |
| THE(| ORY | | | | | | | | | | |
| 1 | EC6T01 | OE | Digital Communication | 3 | | | 3 | 3 | | | |
| 2 | EC6T02 | PC | Digital Signal Processing | 3 | | | 3 | 3 | | | |
| 3 | EC6T03 | PC | VLSI Technology | 3 | | | 3 | 3 | | | |
| 4 | EC6T04 | РС | Computer Communication Networks | 3 | | | 3 | 3 | | | |
| 5 | EC6T05 | PE | Wireless Communication | 3 | | | 3 | 3 | | | |
| 6 | EC6T06 | PC | Information Theory Coding | 3 | | | 3 | 3 | | | |
| PRA | ACTICAL | | | | | | | | | | |
| 7 | EC6L01 | РС | Communication Systems Engineering Lab | | | 2 | 1.5 | 3 | | | |
| 8 | EC6L02 | OE | Digital Signal Processing Lab | | | 2 | 1.5 | 3 | | | |
| Total | | | | | | | 21 | 24 | | | |

Summer training/ Industrial Training*

*6-8 weeks training will be held after 6th semester. However, viva-voce will be conducted in the 7th semester and the credit will be added as a part of the colloquium.



FOURTH YEAR

7th Semester

| SL. | Subject | Туре | Course Name | L | | Т | Р | Credits | Contact | |
|-------|------------|------|---------------------------|---|--|---|---|---------|----------|--|
| No. | Code | | | | | | | | Hrs/Week | |
| THE | THEORY | | | | | | | | | |
| 1 | EC7T01 | PE | Microwave Engineering | 3 | | | | 3 | 3 | |
| 2 | EC7EL1/2/3 | PE | Elective I | 3 | | | | 3 | 3 | |
| 3 | EC7EL4/5/6 | PE | Elective II | 3 | | | | 3 | 3 | |
| PRA | CTICAL | | | | | | | | | |
| 4 | EC7SM | PC | Colloquium* | - | | | | 1 | - | |
| 5 | EC7L01 | OE | Microwave Engineering Lab | - | | | 2 | 1 | 2 | |
| 6 | EC7PJ | PC | Project** | | | | | 6 | 6 | |
| Total | Total | | | | | | | 17 | 16 | |

* The student will submit a synopsis for their seminars on any technical topic at the beginning of the semester in a specified format which should be approved by the departmental committee. The student will also have to present the progress of their project through seminars and progress reports.

** The student will have to submit a synopsis and do the literature survey for their major project in this semester.

| | | | 8 th Semester | | | | | | | | | |
|------------|---------------|------|---------------------------|---|---|----|----------------|--|--|--|--|--|
| SL. No. | Subject Code | Туре | Course Name | L | Т | Р | Credits | | | | | |
| THE | THEORY | | | | | | | | | | | |
| 1 | EC8T01 | OE | Digital Image Processing | 3 | | | 3 | | | | | |
| 2 | EC8EL7/8/9 | PE | Elective III | 3 | | | 3 | | | | | |
| 3 | EC8EL10/11/12 | PE | Elective IV | 3 | | | 3 | | | | | |
| 4 | G8T01 | МС | Constitution of India(MC) | | | | (No Credit) | | | | | |
| PRAC | PRACTICAL | | | | | | | | | | | |
| 5 | EC8PJ | PC | Project | | | 16 | 8 | | | | | |
| Total | | | | | | | 17 | | | | | |

Total Credits = 42+118= 160

Electives (I, II, III & IV)

| Subject | | | L:P :T | Preferred | |
|---------|--|---|--------|-----------|--|
| Code | Course name Course name | | | Semester | |
| Coue | | | | | |
| EC7EL1 | Embedded System & Design | 3 | 3:0:0 | VII | |
| CSB502 | Operating Systems(SWAYAM) | 3 | 3:0:0 | VII | |
| EC7EL3 | Biomedical Instrumentation | 3 | 3:0:0 | VII | |
| EC7EL4 | Multimedia Communication | 3 | 3:0:0 | VII | |
| EC7EL5 | Optical Fiber Communication | 3 | 3:0:0 | VII | |
| EC7EL6 | Power Electronics | 3 | 3:0:0 | VII | |
| EC8EL7 | Body Area Network | 3 | 3:0:0 | VII | |
| EC8EL8 | Nano Technology | 3 | 3:0:0 | VII | |
| EC8EL9 | Speech Processing | 3 | 3:0:0 | VIII | |
| EC8EL10 | Wireless Cellular and LTE 4G Broadband | 3 | 3:0:0 | VIII | |
| CSB831 | Cryptography & Network Security | 3 | 3:0:0 | VIII | |
| EC8EL12 | Fundamentals of MEMS | 3 | 3:0:0 | VIII | |

Courses which can be offered in MOOCS

Students can opt up to 20% of credits offered in current semester. The institution shall give the equivalent credit weightage to the students for the credits earned through online learning courses through SWAYAM platform in the credit plan of the program

| Subject | Ŧ | | | Preferred |
|---------|------|---------------------------------------|--------|-----------|
| Code | Туре | Course name | Credit | Semester |
| EC7EL6 | OE | Fundamentals of Power Electronics | 3 | VII |
| EC6T01 | OE | Fundamentals of Digital Communication | 3 | VI |
| EC3T03 | PC | Digital Electronics Circuit | 4 | III |
| EC4T04 | PC | Analog Circuits | 3 | IV |
| EC4T03 | PC | Microprocessor and Microcontroller | 3 | IV/V |
| EC5T01 | PE | Antennas | 3 | V |
| EC8HT02 | PE | Biomedical Signal Processing | 3 | VIII |
| EC6T06 | PC | Control Engineering | 3 | VI |
| EC7EL2 | OE | Introduction to Operating Systems | 3 | VIII |

10.6 INFORMATION TECHNOLOGY (THIRD SEMESTER ONWARDS)

SECOND YEAR

SEMESTER 3

| SL/ | | | Contact | hours p | | |
|------|--------------|--|---------|-----------|----------|---------|
| SL/ | Subject Code | Course Name | | week | | Credits |
| No | | | L | Т | Р | |
| Theo | ory | | | 1 | * | |
| 1 | ECB303 | Digital Electronics & Logic Design | 2 | 1 | - | 3 |
| 2 | ITB301 | Object Oriented Programming | 3 | - | - | 3 |
| 3 | ITB302 | Computer Organization & Architecture | 3 | - | - | 3 |
| 4 | ITB303 | Data Structures | 3 | - | - | 3 |
| 5 | MAT3T2 | Differential Calculus | 3 | 1 | - | 4 |
| | | Total | Credits | (The | eory) | 16 |
| Prac | tical | | | | | |
| 1 | ITB311 | Object Oriented Programming Lab | - | - | 3 | 1.5 |
| 2 | ITB312 | Data Structures Lab | - | - | 3 | 1.5 |
| 3 | ECB313 | Digital Electronics & Logic Design Lab | - | - | 3 | 1.5 |
| | | Total | Cred | lits(Prac | tical) | 4.5 |
| | | | To | tal Cre | dits | 20.5 |

| | | SEMESTER 4 | | | | | | |
|------|--------------|-------------------------------------|-------|-------------------|-----------|--------|---------|--|
| SL/ | | | | Contact hours per | | | | |
| 5L/ | Subject Code | Course Name | | | week | | Credits | |
| No | | | | L | Г | Р | | |
| Theo | ory | | | I | I | I | | |
| 1 | MAT4T2 | Discrete Mathematics | | 3 | 1 | | 4 | |
| 2 | ITB401 | Computer Graphics & Virtual Reality | | 3 | - | | 3 | |
| 3 | ITB402 | Operating System | | 3 | - | | 3 | |
| 4 | ITB403 | Algorithm Analysis and Design | | 3 | - | | 3 | |
| 5 | ITB404 | Formal Language & Automata Theory | | 3 | - | | 3 | |
| | | | Total | Credits | (The | ory) | 16 | |
| Prac | tical | | | | | | | |
| 1 | ITB411 | Algorithm Analysis and Design Lab | | - | - | 3 | 1.5 | |
| 2 | ITB412 | Operating System Lab | | - | - | 3 | 1.5 | |
| 3 | ITB413 | Computer Graphics Lab | | - | - | 3 | 1.5 | |
| | | | Total | Cred | lits(Prac | tical) | 4.5 | |
| | | | | To | tal Cree | dits | 20.5 | |

THIRD YEAR

SEMESTER 5

| SL/ | | | Contact | hours pe | | |
|-------|--------------|----------------------------------|----------|-----------|--------|---------|
| SL/ | Subject Code | Course Name | | Week | | Credits |
| No | | | L | Т | Р | |
| Theo | ory | | <u> </u> | - | 1- | |
| 1 | MAT5T1 | Numerical Analysis & Probability | 3 | 1 | - | 4 |
| 2 | ITB501 | Computer Networks | 3 | - | - | 3 |
| 3 | ITB502 | Database Management Systems | 3 | - | - | 3 |
| 4 | ITB503 | Compiler Design | 3 | - | - | 3 |
| 5 | | Elective I | 3 | - | | 3 |
| | | Total | Credits | (The | eory) | 16 |
| Pract | tical | | | | | |
| 1 | ITB511 | Database Management Systems Lab | - | - | 3 | 1.5 |
| 2 | ITB512 | Compiler Design Lab | - | - | 3 | 1.5 |
| 3 | ITB513 | Network Lab | - | - | 3 | 1.5 |
| | | Total | Crec | lits(Prac | tical) | 4.5 |
| | | | То | tal Cree | lits | 20.5 |

SEMESTER 6

| SL/ | | | | Contact | hours pe | r | |
|-------|--------------|--|---------|---------|----------|--------|---------|
| SL/ | Subject Code | Course Name | | | week | | Credits |
| No | | | | L | Т | Р | |
| Theo | ory | T T | | I | | 1 | |
| 1 | ITB601 | Industrial Economics & Principles of Man | agement | 3 | | - | 3 |
| 2 | ITB602 | Web Technology | | 3 | - | - | 3 |
| 3 | ITB603 | Software Engineering | | 3 | | - | 3 |
| 4 | | Elective II | | 3 | | | 3 |
| | | | Total | Credits | (The | eory) | 12 |
| Pract | tical | | | | | | |
| 1 | ITB611 | System Programming Lab | | | 1 | 3 | 2.5 |
| 2 | ITB612 | Web Technology Lab | | | | 3 | 1.5 |
| 3 | ITBPJ1 | Project (Minor) | | | | 6 | 3 |
| | | | Total | Cred | its(Prac | tical) | 7 |
| | | | | Tot | tal Creo | lits | 19 |

| | | SEMESTER | 7 | | | | |
|-----------|--------------|-------------------|-------|--------------|----------------------|----------|---------|
| SL/ No | Subject Code | Course Name | | Contact L | hours p week T | er P | Credits |
| Theo | ory | | | | L | <u>_</u> | |
| 1 | ITB701 | Machine Learning | | 3 | - | - | 3 |
| 2 | | Elective III | | 3 | - | - | 3 |
| 3 | | Elective IV | | 3 | - | - | 3 |
| 4 | | Open Elective I | | 3 | - | - | 3 |
| | | | Total | Credits | (The | eory) | 12 |
| Prac | tical | | | | | | |
| 1 | ITBCQ1 | Colloquium* | | - | - | - | |
| 2 | ITBPJ2 | Project (Major) # | | - | - | 12 | 6 |
| | | | Total | Cred | its (Prac | ctical) | 6 |
| | | | | Tot | al Cre | dits | 18 |

FOURTH YEAR

* The student will give presentation (Colloquium) on the summer/winter/industrial training/Internship (4 – 6 weeks) that She/ He underwent during the vacation period after 4th, 5th or 6th semester.

The student will submit a synopsis for their Project at the beginning of the semester in a specified format which should be approved by the departmental committee. The student will also have to present the progress of their project through seminars and progress reports.

| SEMESTER | 8 |
|----------|---|

| SL/ No | Subject Code | Course Name | Contact L | hours p week T | er P | Credits |
|-----------|--------------|--|--------------|----------------------|---------|---------|
| Theo | ory | | | | | |
| 1 | | Elective V | 3 | - | - | 3 |
| 2 | | Open Elective II | 3 | - | - | 3 |
| 3 | G8T01 | Constitution of India (Mandatory Course) | - | - | - | |
| | | Total | Credits | (The | eory) | 6 |
| Prac | tical | | | | | |
| 1 | ITB811 | Communication Skills Lab | - | - | 3 | 1.5 |
| 2 | ITBPJ3 | Project (Major) ** | - | - | 20 | 10 |
| | | Total | Credits | (Practic | al) | 11.5 |
| | | | Total (| Credits | | 17.5 |

** The student will continue the project work carried over from the previous semester. The student will submit the final report/thesis of the project in the format specified by the School.

Total Credits = 42+116= 158

| LIST OF ELECTIVE COU | JRSES |
|----------------------|-------|
|----------------------|-------|

| Subject | | C 1' | r . | T (1 | |
|---------|--|---------|------------|--------------|-----------|
| code | Course Name | Credits | Lectures | Tutorials | Practical |
| ITBEL1 | Distributed Database | 3 | 3 | | _ |
| ITBEL2 | Mobile Computing (SWAYAM) | 3 | 3 | - | _ |
| ITBEL3 | Cloud Computing (SWAYAM) | | | | |
| ITBEL4 | Advanced Computer Architecture | 3 | 3 | - | _ |
| ITBEL5 | Management Information System and | 3 | 3 | - | - |
| | Knowledge Management | | | | |
| ITBEL6 | Statistical Modeling and Tools | 3 | 3 | | - |
| ITBEL7 | Mobile Application Development | 3 | 3 | | - |
| ITBEL8 | Network Protocols | 3 | 3 | | - |
| ITBEL9 | XML and Web Services | 3 | 3 | | - |
| ITBEL10 | Service Oriented Architecture | 3 | 3 | | - |
| ITBEL11 | System Analysis and Design | 3 | 3 | | - |
| ITBEL12 | Decision Support System | 3 | 3 | | - |
| ITBEL13 | Advanced Java Technology | 3 | 3 | | - |
| ITBEL14 | .Net Technology | 3 | 3 | | - |
| ITBEL15 | Natural Language Processing | 3 | 3 | | - |
| ITBEL16 | Distributed Computing | 3 | 3 | | - |
| ITBEL17 | Multimedia Technologies | 3 | 3 | | - |
| ITBEL18 | Mobile Communications | 3 | 3 | | - |
| ITBEL19 | Cryptography and Information Security | | | | |
| ITBEL20 | Software Quality Assurance | 3 | 3 | | - |
| | Soft Computing | 3 | 3 | | - |
| ITBEL22 | Blockchain Architecture & Design | 3 | 3 | | - |
| ITBEL23 | Advanced Database Systems | 3 | 3 | | - |
| EC8T01 | Digital Image Processing | 3 | 3 | - | - |

LIST OF OPEN ELECTIVE COURSES

| Subject | | | | | |
|---------|--------------------------------|---------|----------|-----------|-----------|
| | Course Name | Credits | Lectures | Tutorials | Practical |
| code | | | | | |
| ITBOE1 | Artificial Intelligence | 3 | 3 | - | - |
| ITBOE2 | Internet-of-Things | 3 | 3 | - | - |
| ITBOE3 | Big Data Analytics | 3 | 3 | - | - |
| EC7EL1 | Embedded Systems | 3 | 3 | - | - |
| ITBOE4 | E-Business (SWAYAM) | 3 | 3 | - | - |
| ITBOE5 | Data Mining & Data Warehousing | 3 | 3 | - | - |

Note: The following courses will be offered through SWAYAM.

- 1. E-Business
- 2. Mobile Computing
- 3. Cloud Computing

11. ACTIVITIES





CONTACT US

ADMINISTRATIVE OFFICE:

NAGALAND UNIVERSITY RESIDENTIAL CAMPUS, LANDMARK COLONY, DIMAPUR – 797112, NAGALAND

ACADEMIC COMPLEX:

SCHOOL OF ENGINEERING & TECHNOLOGY, NAGALAND UNIVERSITY, D.C COURT JUNCTION, DIMAPUR – 797112, NAGALAND

Admission Convenor: Dr. Chitrasen Lairenjam: 9402832852 Admission committee member:

Mr. Shanchamo Yanthan: 8731826326

Dr. Hanumant Singh Rathore: 94029 92640

Mr. Chenlep Konyak: 87318 95353

Dr. Heisnam Rohen Singh: 9085068097

Email: set.admin@nagalanduniversity.ac.in

Website: www.nagalanduniversity.ac.in

Online Application Link: http://www.admission.nagalanduniversity.ac.in/

IMPORTANT DATES AND APPLICATION FEES

| Starting of Online Admission form | 5 th July 2021 | | |
|--|---|--|--|
| Last date of Online Admission form submission | 13 th August 2021 | | |
| Declaration of selected list (List of selected candidates shall be notified on university website) | 19 th August 2021 | | |
| Date of admission | 20 th and 21 st August 2021 | | |
| Starting of Classes | 27 th August 2021 | | |
| Application Fees | 250 (GEN/OBC) 200 (SC/ST) | | |